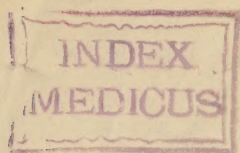


Pyncheon (E.) Card



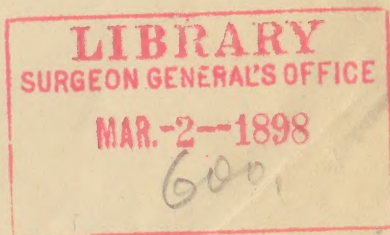
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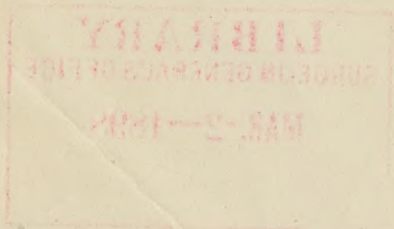
—BY—

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Both pleasure and profit may often be derived from looking up the history of some familiar implement of trade, which we will thereby learn has, through evolution, materially changed in form, and mayhap also in use, when compared with its earlier prototypes. In all American surgical instrument catalogues, for the past quarter of a century or more, the Buttles inhaler will be found quoted, and generally illustrated, though the illustrations have from time to time varied.

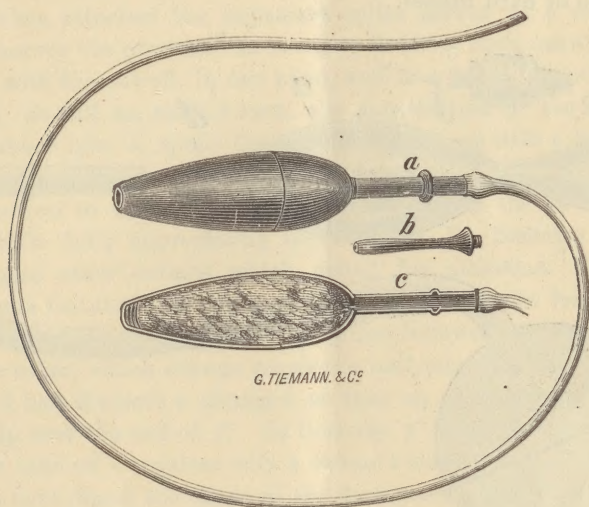


FIGURE 1. The Original Buttles Inhaler ($\frac{2}{3}$ Size.)

As originally designed by Dr. M. S. Buttles* it was evidently intended that for inflation it was to be operated by either the patient or physician blowing through the rubber tube. The small tip *b* was designed for use with infants, when a short piece of soft rubber tubing was to be slipped over it and the free end introduced into the child's nose. While the open end of *a* was designed for the adult nose, the instrument, when used as an inhaler, was often held in the mouth.

*N. Y. Med. Record, March 15th, 1886; page 44.

Shortly thereafter this device was modified by Dr. D. B. St. John Roosa, who added a bean-shaped nose-piece with several small openings and also a compression hand ball.

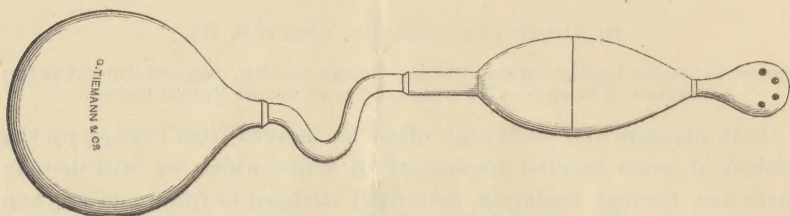


FIGURE 2. Roosa's Eustachian Dilator ($\frac{3}{8}$ Size).

It next appeared in the form shown in figure 3, the small piece *f* having been added for use with the Eustachian catheter. Strange to say, this style remained practically unchanged for a score of years. It is made of hard rubber.

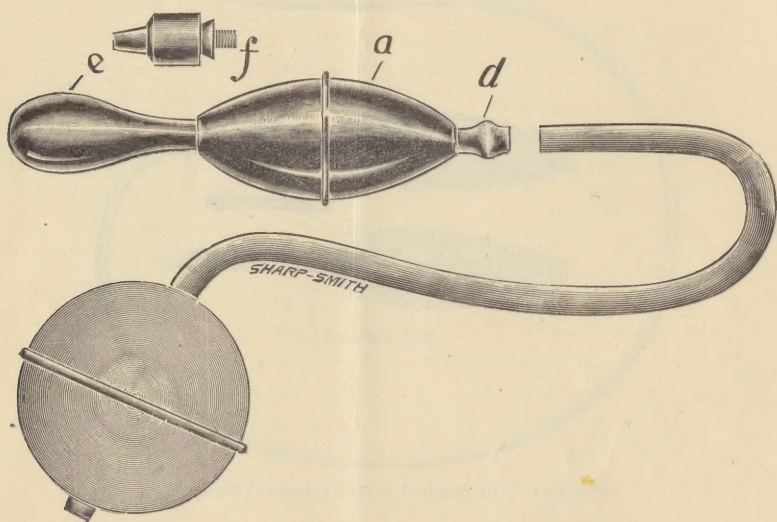


FIGURE 3. Common Form of Buttlers' Inhaler ($\frac{3}{8}$ Size).

Formerly compressed air devices were not in general use, and sprays and their analogues were operated by compression bulbs, which in those days were more desirable than now, as patients were then more often treated at their homes, the special office practice of recent times being comparatively unknown. With the advent of the compressed air apparatus, a desire was manifested to use the Buttlers inhaler by attaching it to the cut-off, which was done by somewhat enlarging the

hole in the tube-nipple *d*; but this, as generally made, was too slender to allow of the hole therein being sufficiently enlarged without impairing its strength, and, at best, the result was unsatisfactory, as the device was thus awkward to handle.

Dr. Seth Scott Bishop, in appreciation of this trouble, suggested an improvement, both efficient and practical, and it was to supplant the tube-nipple with an expanded collar, so that the cut-off would tightly fit into a conical hole therein.

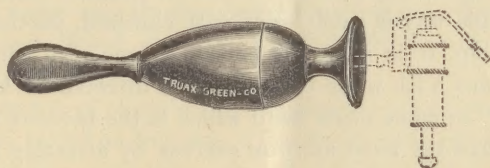


FIGURE 4. Dr. Bishop's Inflator ($\frac{1}{2}$ -size).

When thus attached the expanded collar serves as a convenient handle whereby the operator can securely hold the instrument, in combination with the cut-off, in one hand, and thus leave the other hand free; but, as will be readily seen, the substitution of the collar, *g*, for the tube-nipple, *d*, spoils the instrument for use with a hand bulb, and necessitates the practitioner having one inflator of each kind, if he desires ever to use the instrument except with the cut-off. The writer, while fully appreciating the value of Dr. Bishop's improvement, noted other defects which called for attention. The most troublesome feature in its use was in making the change from *e* to *f*, which required the unscrewing of one piece followed by the screwing on of the other, which change requires a half-minute's time. To remedy this I had the part *e* changed so that an enlarged hole in same would slip over the end of *f*. In this way *f* is not removed, and to put on or take off *e* requires only a second's time.

In the next place, the shape of the nose-piece *e* was often found to be unsatisfactory; and, as an improvement in its place, I have substituted an acorn-shaped piece (*h*, fig. 5) which has proven to be a perfect fit in every case in which it has been used—never slipping in too far to be effective, as was the frequent fault of its predecessor. I also added a small hard rubber union, *i*, such as is supplied with the Davidson No. 65 spray-bottles, which, when desired, can be left attached to the tube of a hand ball ready for use when called away from the office. If, on the other hand, its use is not required, it can be left permanently, with the sponge, inside the chamber, *a*, without harm and being thus in its place can always be quickly found when wanted.

The best packing to place inside the medicine-chamber, to hold the medicament, is sponge of strong texture, in one piece, large enough to loosely fill the cavity. Cotton is not desirable for this purpose, and may prove to be very objectionable as, for example, when disintegrated by iodine, in which case its use becomes positively dangerous.

I furthermore observed that the outlet hole was usually made too small; so I have had it materially enlarged, as in successful Politzerization the volume of air driven in is of as much importance as is the pressure employed; and here let me add *en passant* that while Politzerization in this way is easily done with children, particularly if they assist by crying, it is often not so easily done with adults. Failure is frequently met with when the patient is directed to swallow water or say "hick" or some other word which is the favorite of the operator. I have had the most uniform success by directing the patient to cough, and therefore rarely am compelled to use the Eustachian catheter. Either ear can be inflated at will by tightly closing the external opening of the other ear.

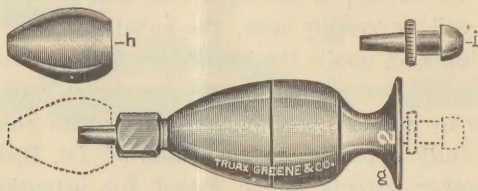


FIGURE 5. Author's Modification ($\frac{1}{2}$ size).

The ear specialist will find it convenient to be supplied with several of these inflators charged with different medicines, as his practice requires. In this case he can have them numbered (see fig. 5) so as to be able to easily select the one wanted. It is also not amiss to have one of the set made of metal in which chloroform or any other remedy which would be injurious to rubber can be used, and it may also, if desired, be heated. The expanded collar, *g*, in addition to its being a handle, serves also as a pedestal upon which the inhaler can be set so as to prevent its rolling off the treatment desk. Furthermore, being funnel-shaped, a few drops of the required medicine can at any time be dropped through the opening onto the sponge, thus recharging without having the trouble each time to unscrew or open the medicine-chamber.

By removing the tip, *f*, and holding this instrument between the lips, it can be used with a continuous fifty-pound pressure as an inhaler,

when indicated, for the administration of the so-called impaction treatment*. While no nebula is produced, the air entering becomes impregnated with the volatile medicament used, and in practice the results are beneficial.

After the free use of a medicated albolene spray, this instrument can be used as an inhaler, so that with suitably medicated air the oily spray first used may be forced to the deeper nasal recesses and thus be of particular value when any of the accessory sinuses are affected. In such case a twenty-pound pressure used intermittently would be sufficient. Both nares may be alternately thus treated; the opposite one each time being closed, and the patient meantime inhaling. In this way no middle-ear inflation will occur.

In the treatment of chronic non-suppurative middle-ear trouble, this process can be varied as follows: After freely spraying the nares with a bland, oily spray, as a three-per-cent. camphor-menthol solution in liquid albolene, follow by Politzerization. Some of the oily fluid will be forced through the Eustachian canal into the middle-ear and prove beneficial. The danger of inflation after the use of an aqueous douche or spray is well known; hence, no watery solution should be employed prior to this method of treatment.

When this inflator is used with the Eustachian catheter, a low pressure of from 8 to 15 pounds is sufficient, and the continuous stream of air thus secured often gives far better results than are to be had by the intermitting compressions of a hand bag, particularly if any degree of acute inflammation be present. When used with a catheter the tip, *f*, should be extended with a short piece of soft rubber tubing. To secure the different degrees of pressure mentioned, an auxiliary air-tank is desirable.

In acute coryza, medicated air will prove very efficacious, owing to its power of penetration. The following formula might be suggested:

℞	Guaiacol (Merck),	
	Ol. Pine Needles	āā ʒi.
	Camphor-Menthol	ʒii.
	Ol. Eucalyptus (Saunders)	ʒss.

M.

Moisten the sponge with 10 or 15 drops, and use by inhalation as previously described. Results quite as satisfactory will be had as are claimed for any of the popularly advertised menthol or "Kangaroo" inhalers.

Columbus Memorial Building.

**Jour. Am. Med. Ass'n.*, May 12th, 1894, page 702.

